PHMC Environmental Management Performance Report – June 2002 Section J – Plutonium Finishing Plant



Section J Plutonium Finishing Plant

PROJECT MANAGERS

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INTRODUCTION

The Plutonium Finishing Plant (PFP) consists of Project Baseline Summary (PBS) RL-CP03, Work Breakdown Structure (WBS) 3.3.3.

NOTE: Unless otherwise noted, all information contained herein is as of the end of June 2002.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, and RL) shows that three milestones were completed early, one milestone was completed two days late, and one FY 2001 milestone is overdue. Further details can be found in the milestone list.

NOTABLE ACCOMPLISHMENTS

Maintain Safe & Secure SNM WBS 3.3.3.1

Negotiations have been held and progress is being made with RL, DOE-HQ, International Atomic Energy Agency (IAEA), and Protection Technology Hanford (PTH) in establishing a path forward to stabilize and package IAEA safeguarded material to 3013 criteria in Vault 3 without losing IAEA surveillance continuity.

Maintain Safe and Compliant PFP WBS 3.3.3.2

A National Environmental Policy Administration (NEPA) Categorical Exclusion for Deactivation and Demolition of ancillary buildings at PFP was prepared and submitted. A draft TPA change request was issued reflecting the completion of negotiations for milestones to get PFP to "Slab-on-grade" for public comment.

Stabilization of Nuclear Material WBS 3.3.3.3

Metals, Alloys, Oxides and Polycubes — During June, 56 Bagless Transfer Containers (BTCs) were welded and 30 furnace runs were completed in 234-5Z and 2736-ZB. Through June a cumulative total of 634 BTCs have now been made in the 234-5Z and 2736-ZB facilities. Stabilization of Magnesium Hydroxide precipitated material, which began in mid April, continues with 273 of the 607 liters stabilized. Processing of the magnesium hydroxide precipitation material continues in both 234-5Z and 2736-ZB and is expected to be disposition ready in late July. During initial startup of the polycube process in April 2002, water condensed in the filters during operation that restricted the furnace off-gas flow rates below the parameters identified in the operating specification document. This problem was resolved and resumption of the polycube stabilization process campaign will be initiated on July 9th.

Residues 34 Representatives of the Carlsbad Field Office (CBFO), Environmental Protection Agency (EPA) and the State of New Mexico conducted a recertification audit of the Hanford Waste Isolation Pilot Plant (WIPP) program. The annual audit resulted in fewer deficiencies than any previous audit of the Hanford program and recertified the Hanford WIPP program for another year. During the reporting period, 184,702 grams of Sand, Slag and Crucible (SS&C) were packaged into 16 Pipe Overpack Containers (POCs). Processing of all planned FY 2002 SS&C material was completed on May 31, 2002. Processing of FY 2003 SS&C material was then initiated and continues to exceed baseline expectations.

Solutions ¾ During June the Solutions Stabilization Project stabilized three hundred liters of plutonium bearing solutions. As a result 100 percent of the solutions inventory has now been stabilized.

Outer Can Packaging ¾ Thirty-two 3013 Containers were produced during the June reporting period with a fiscal year to date total of 255 containers. Packaging of the stabilized solution product continues, with a total of 3,714 packaged or 87 percent of the solution inventory scheduled for disposition in 3013 containers. Processing of the Oxalate Precipitation material into 3013 containers was completed in late June.

Disposition of Nuclear Material WBS 3.3.3.4

A paper summarizing the review of conditions and circumstances associated with an anomalous Bagless Transfer Can (BTC) was prepared and issued. The BTC is now contained in a 3013 container and has been recommended for increased surveillance. Resolution to the Defense Nuclear Facilities Safety Board (DNFSB) question pertaining to 12 barrels of retrievably stored waste high in Pu238 has been initiated. Thermal and radiation characteristics are being reassessed after the 25 years the material has been stored in the burial ground. This information will be used to evaluate different handling, packaging, and disposition strategies for the items. The final report on the use of pure and mixed Cerium Dioxide and Magnesium Dioxide as surrogate materials for testing heat profiles in Plutonium Dioxide thermal stabilization furnaces, HNF-11207, is at RL awaiting approval for public release. In support of residues and safety, solid waste operations arranged for scaffolding, staging platform, hoisting and rigging, load testing for transfer of 200 product receiver (PR) cans. These cans have been relocated to basement tunnels No. 5 and 6 thereby allowing installation of the Segmented gamma scan assay system (SGSAS) in room 172. Completion of this task resolved a safety concern issued in FY01 concerning PR cans being stored outside in Connex boxes.

Disposition PFP Facility WBS 3.3.3.5

The dismantling of the first numbered structure in the PFP complex, a large gas cylinder storage dock, was safely completed in June utilizing existing resources. Demolition of 2734-Z is currently scheduled in the PFP baseline for FY 2014 but has been accelerated to meet several PFP decommissioning objectives, consistent with RL's plan to accelerate decommissioning of the complex. This work was completed without incident. Significant progress is also continuing in accelerated cleanup of the PFP yard area. Sixty yards of scrap lumber have been removed and a 40-foot trailer of excess material is ready to ship. The Special Task Team also completed removal of 100 feet of Hydrogen Peroxide line in Zone 3.

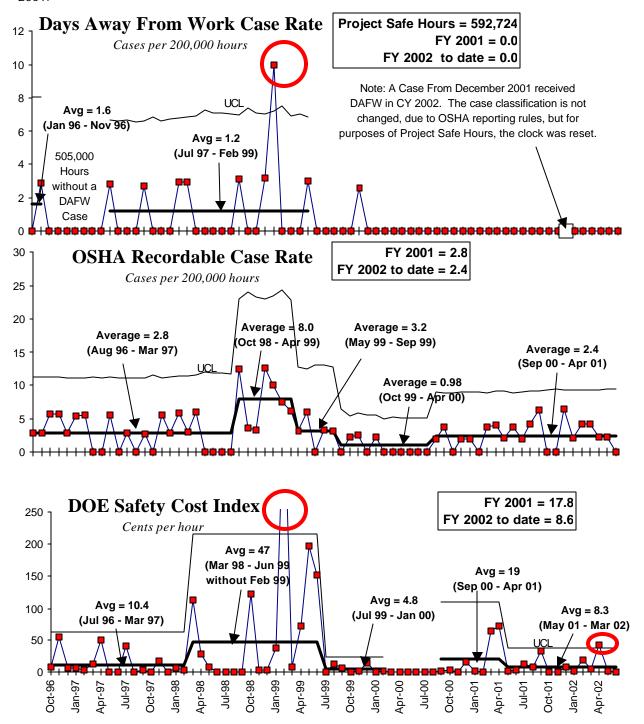
Project Management & Support WBS 3.3.3.6

In a June 11th letter to the Assistant Secretary for Environmental Management, the Chairman of the Defense Nuclear Facilities Safety Board (DNFSB) commended the PFP for progress in implementing Recommendations 94-1, "Improved Schedule for Remediation in the Defense Nuclear Facilities Complex" and 2000-1, "Prioritization for Stabilizing Nuclear Materials." On June 12th the PFP submitted an application to RL for review and consideration in the Voluntary Protection Program (VPP) Star Site Recognition Program.

SAFETY

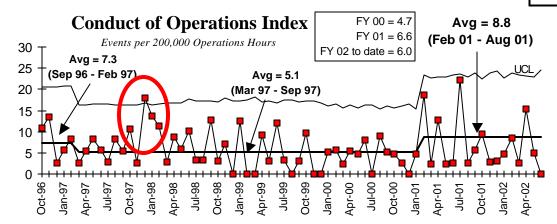
Green

There have now been over 592,724 safe staff hours since the last recorded workday injury in December 2001.



CONDUCT OF OPERATIONS

Green



Breakthroughs / Opportunities for Improvement

Breakthroughs

Nothing to report at this time.

Opportunities for Improvement

Inventory Control ¾ PFP and contractor staffs have identified opportunities for improving the material control and accountability (MC&A) inventory process at the PFP. The MC&A Process Improvement Plan draft report is currently being prepared and is scheduled for final approval and release in July 2002.

Processing Improvement ¾ The Process Qualification Application was submitted on May 17, 2002. Approval of the process qualification by RL is required to allow processing of oxides to achieve the DNFSB milestones and PFP baseline schedules. Volume II of the application was submitted to a Third Party Review Team on June 14th, with expectation of implementing the Process Qualification Program by mid August.

UPCOMING ACTIVITIES

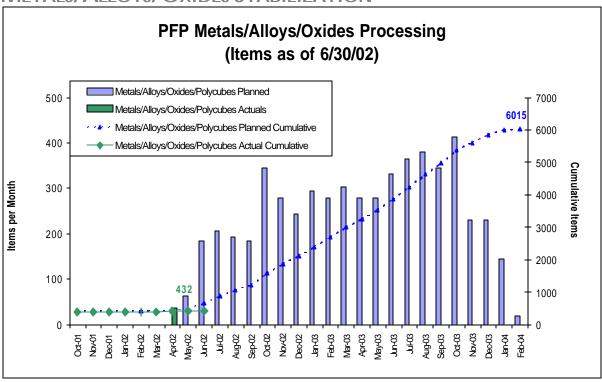
Solutions Processing — Complete solutions stabilization and packaging by July 31, 2002.

MILESTONE ACHIEVEMENT

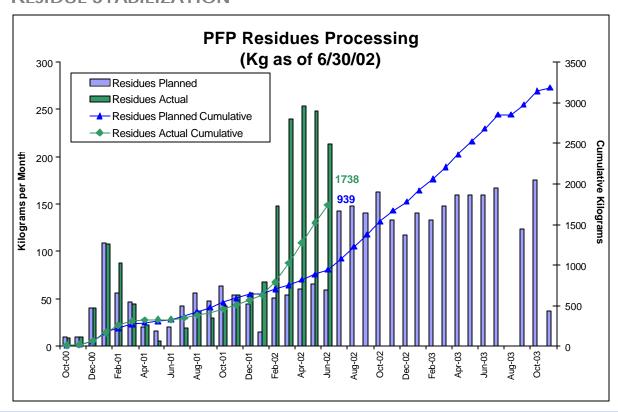
Number	Milestone Title	Туре	Due Date	Actual Date	Forecast Date	Status/ Comments
TRP-01-501	Package Alloys for disposition to WIPP or stabilize & package per DOE STD-3013 criteria	DNFSB	6/30/01		9/30/02	Moisture Measurement Resolution +60 Days
TRP-01-502	Complete Installation of the Bagless Transfer System	RL	10/1/01	8/29/01		Completed ahead of schedule
TRP-04-505	Hot Startup of the 2736-ZB Stabilization & Packaging System	PI	11/27/01	11/29/01		Complete
TRP-02-505	Complete Direct Discard of Selected Solutions	TPA	3/31/02	3/11/02		Completed ahead of schedule
TRP-01-500	Complete Stabilization & Packaging of Plutonium Solutions	DNFSB	7/31/02		7/31/02	Ahead of schedule to Baseline date of 10/16/02 On schedule to DNFSB date of 7/31/02
TRP-02-501	Complete Stabilization & Packaging of Polycubes	DNFSB	8/31/02		3/21/2003	On schedule to Baseline date of 3/21/03 Behind schedule to DNFSB date of 8/31/02
TRP-02-504	Complete Repackaging & Shipment of Hanford Ash to CWC	TPA	8/31/02	3/7/02		Completed ahead of schedule
TRP-04-506	Completion of all PU Stabilization & Packaging	PI Stretch	2/18/04			On schedule
TRP-04-507	Complete Repackaging & Shipment of Sand, Slag and Crucible to CWC	TPA	1/30/04			Ahead of Schedule
TRP-03-500	Complete Stabilization & Packaging of Residues	DNFSB	4/30/04			On Schedule
TRP-05-500	Complete Stabilization & Packaging of Oxides >30% Pu/U	DNFSB	5/31/04			On Schedule
TRP-08-500	Dismantlement NEPA/ CERCLA Decision Document Complete	RL	9/30/05			On Schedule
TRP-06-501	Complete 100% of Legacy Pu Holdup Removal & Disposition	PI Stretch	9/30/06			On Schedule
TRP-06-502	232-Z & PPSL Annex Demolished to Slab-on-Grade	PI Stretch	9/30/06			On Schedule
TRP-06-503	Protected Area Reduced to 2736- Z/ZB and Yard Storage	PI Stretch	9/30/06			On Schedule
TRP-06-504	Relocate SNM Required to Reduce the PFP Protected Area	PI Stretch	9/30/06			On Schedule

PERFORMANCE OBJECTIVES

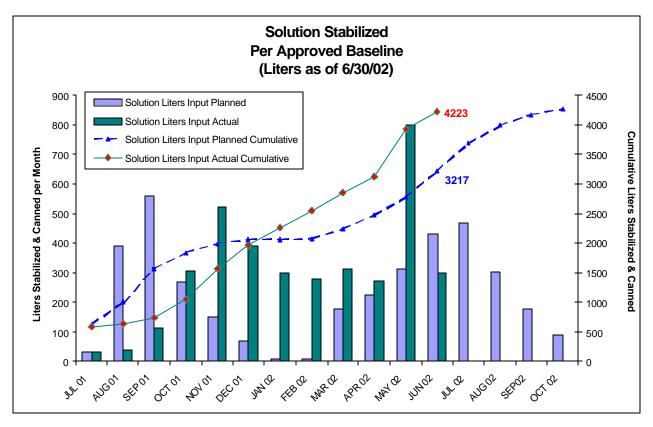
METALS/ALLOYS/OXIDES STABILIZATION

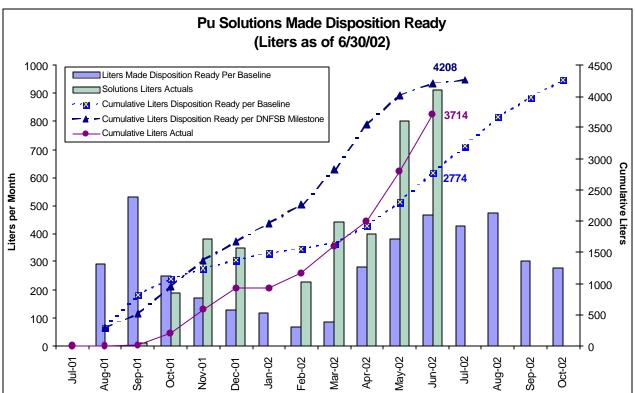


RESIDUE STABILIZATION



SOLUTIONS STABILIZATION





FY 2002 SCHEDULE / COST PERFORMANCE – ALL FUND TYPES FISCAL YEAR TO DATE STATUS – (\$000)

		FYTD							
	By PBS	BCWS	BCWP	ACWP	SV \$	SV %	CV\$	CV %	BAC
PBS CP03 WBS 3.3.3.1	Maintain Safe and Secure SNM	2,771.3	3,141.2	3,137.3	369.9	13.3%	3.9	0.1%	4,111.5
PBS CP03 WBS 3.3.3.2	Maintain Safe and Compliant PFP	19,400.1	19,608.8	19,217.5	208.7	1.1%	391.3	2.0%	26,698.6
PBS CP03 WBS 3.3.3.3	SNM Stabilization	20,480.5	22,767.1	17,786.9	2286.6	11.2%	4980.2	21.9%	28,370.1
PBS CP03 WBS 3.3.3.4	Disposition SNM	3,034.7	3,174.3	2,367.3	139.6	4.6%	807.0	25.4%	4,178.9
PBS CP03 WBS 3.3.3.5	Disposition PFP Facility	1,089.4	1,148.2	983.6	58.8	5.4%	164.6	14.3%	1,385.6
PBS CP03 WBS 3.3.3.6	PFP Project Management and Support	12,892.9	13,159.2	13,695.3	266.3	2.1%	(536.1)	-4.1%	11,271.9
	Total:	\$59,669	\$62,999	\$57,188	\$3,330	5.6%	\$5,811	9.2%	\$76,017
PBS CP03 WBS 3.3.3.7	W-460 PuSH Line Item Support	425.6	3,485.0	545.2	3,059.4	718.8%	2,939.8	84.4%	2,326
	Total:	\$60,095	\$66,484	\$57,733	\$6,389	10.6%	\$8,751	13.2%	\$78,342

FY TO DATE SCHEDULE / COST PERFORMANCE

The favorable schedule variance marks the sixth consecutive month of steady improvement. During this period the variance has improved 23.6 percent to a current level of + 10.6 percent. The strength of the positive schedule variance continues to be primarily the result of the outstanding successes in the solutions and residues processing projects where production has respectively doubled and tripled baseline expectations.

The current 13.2 percent favorable cost variance, up 2.2 percent from May, continues a 6-month positive upward trend established in January. A continuance of higher than planned performance within the solutions, residues and packaging project areas continues to be the primary contributor to the positive status, accounting for 83 percent of this positive variance. Additionally, the increased Outer Can Welder (OCW) production rate resulted in a complete reduction in the FY 2002 backlog. Although staffing continues below authorized levels overtime usage continues to trend within budgetary guidance.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, Fiscal Year to Date (FYTD) Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

SCHEDULE VARIANCE ANALYSIS: (+\$6.4M)

3.3.3.1 Maintain Safe & Secure SNM

Description and Cause: The thirteen percent favorable schedule variance (+\$0.4M) is due to the performance of FY01 Remote Monitoring System (RMS) work scope in FY02.

Impact: None.

Corrective Action: A detailed working level schedule has been implemented to complete FY01 and FY02 RMS work scope this fiscal year.

3.3.3.2 Maintain Safe & Compliant PFP

Description and Cause: The current one percent favorable schedule variance (+\$0.2M) is within the

reportable threshold. **Impact:** None.

Corrective Action: None.

3.3.3.3 SNM Stabilization

Description and Cause: The eleven percent favorable schedule variance (+\$2.3M) is primarily attributable to the outstanding successes in the solutions and residues processing projects where production has respectively doubled and trebled baseline expectations. Completion of prior year (FY 2001) carryover workscope in the solutions and residues processing areas also contribute to this positive variance.

Impact: Progress within the solutions processing project is now 100 percent complete and supports the Defense Nuclear Facilities Safety Board (DNFSB) milestone (TRP-05-500) completion date of July 31, 2002. Additionally, all FY 2002 planned processing of Sand Slag, and Crucible material was completed in late May. Processing of planned FY 2003 SS&C material is underway and continues to exceed baseline expectations.

Corrective Action: None.

3.3.3.4 Disposition SNM

 $\textbf{Description and Cause:} \ \ \text{The five percent favorable schedule variance (+\$0.1M) is within the}$

reportable threshold. **Impact:** None.

Corrective Action: None.

3.3.3.5 Disposition PFP Facility

Description and Cause: The five percent favorable schedule variance (+\$0.1M) is within the

reportable threshold. **Impact:** None.

Corrective Action: None.

3.3.3.6 PFP Project Management & Support

Description and Cause: The two percent favorable schedule variance (+\$0.5M) is within the

reportable threshold.

Impact: None.

Corrective Action: None.

3.3.3.7 W-460 PuSH Line Item Support

Description and Cause: The 718 percent favorable variance (+\$3.1M) is attributable to construction

and facility modification activities scheduled in FY 2001 being completed in FY 2002.

Impact: None. The project completed more than a year ahead of schedule.

Corrective Action: None.

COST VARIANCE ANALYSIS: (+\$8.8M)

3.3.3.1 Maintain Safe & Secure SNM

Description and Cause: The tenth of a percent favorable cost variance (+\$0.004M) continues to be within the reportable threshold.

Impact: None.

Corrective Action: None.

3.3.3.2 Maintain Safe & Compliant PFP

Description and Cause: The two percent favorable cost variance (+\$0.4M) continues to be within the

reportable threshold. **Impact:** None.

Corrective Action: None.

3.3.3.3 SNM Stabilization

Description and Cause: The twenty-two percent favorable cost variance (+\$5.0M) continues to be attributable to sustained higher than planned production within the Solutions Project that has provided the resources for second shift processing Sand, Slag, and Crucible material (SS&C). As a result processing of all planned FY 2002 SS&C material was completed in late May.

Impact: None. This favorable variance will be used to fund other areas of the project and to meet savings commitments identified in the FH contract.

Corrective Action: None.

3.3.3.4 Disposition SNM

Description and Cause: The twenty-five percent favorable cost variance (+\$0.8M) is primarily attributable to efficiently completing work with less than planned staff.

Impact: None.

Corrective Action: Processing of clearances for additional staff is underway and is expected to be completed in July. However, this favorable variance is expected to continue and will be used to fund other areas of the project.

3.3.3.5 Disposition PFP Facility

Description and Cause: The fourteen percent favorable cost variance (+\$0.2M) is directly attributable to a slower than planned transition of technical staff from Project W-460 to the Decommissioning Project.

Impact: None.

Corrective Action: Additional staff are being hired to support accelerated PFP Decommissioning activities.

3.3.3.6 PFP Project Management & Support

Description and Cause: The four percent unfavorable cost variance (-\$0.5M) continues to be within the reportable threshold.

Impact: None.

Corrective Action: None.

3.3.3.7 W-460 PuSH Line Item Support

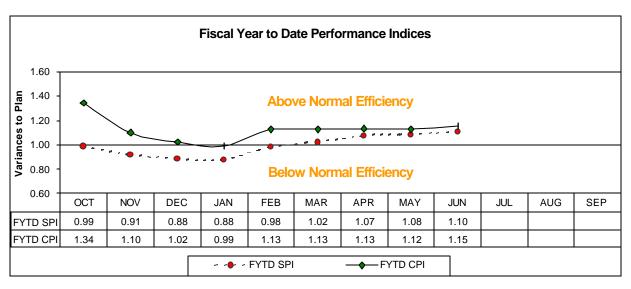
Description and Cause: The 84 percent favorable variance (+\$2.9M) is attributable to efficient

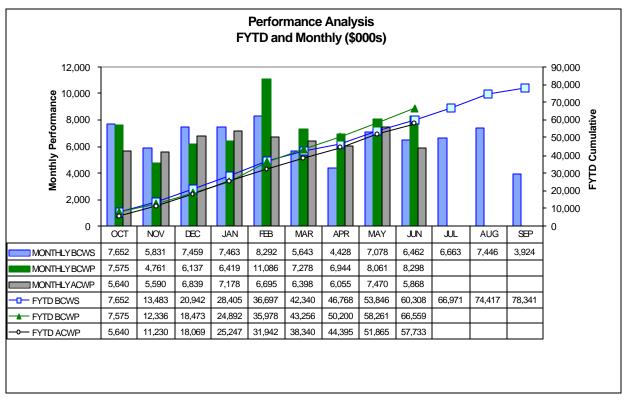
management of the project resulting in completing the project under budget.

Impact: None.

Corrective Action: Funding is in the process of being reprogrammed.

Schedule / Cost Performance (Monthly and FYTD)





FUNDS MANAGEMENT FYTD FUNDS VS SPENDING FORECAST (\$000)

	FH Funds Reallocation		FYSF	Variance	
3.3.3 Plutonium Finishing Plant CP03					
Project Completion - Operating	\$ 84,695	\$	83,528	\$	1,167
- Line Item	\$ 570	\$	545		25
Total	\$ 85,265	\$	84,073	\$	1,192

[Status through June 2002]

Note: FH Reallocation reflects an FYSF adjusted for scope deletions, deferrals, and identified savings to address funding shortfalls, additional unplanned scope, and cost increases.

ISSUES

Technical Issues

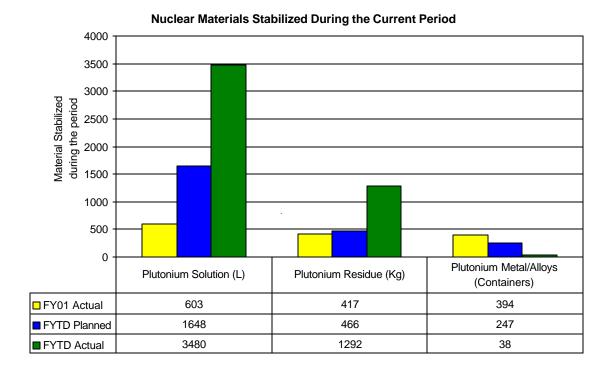
Issue: There are no technical issues at this time.

Regulatory, External, and DOE Issues and DOE Requests

Issue: No other issues identified at this time.

BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

	Date		lmp	pact	Date	_	
BCR No.	Originated	Description	Days	Dollars (\$000s)	Approved	Status	
FH-2002-008	8/13/01	MYWP Bridge		N/A		At RL	
CP03-02-014, R1	6/26/02	SRS Acceptance Criteria #2		\$479	7/10/02	Approved	
CP03-02-015	2/19/02	Remove FY 2002 Neg Mgmt Res		\$6,289	6/10/02	Rejected by DOE-RL	
CP03-02-017	3/6/02	Integrated Surveillance Program		\$196	7/22/02	Approved	
FH-2002-010	2/28/02	Revise Labor Rates		\$2,590		At RL	
FH-2002-011	2/20/02	10 CFR 830 Implementation		- 0 -	7/8/02	Rejected by DOE-RL	
CP03-02-023	2/20/02	Revise WIPP/WAC Requirements		\$100	7/18/02	Approved	
CP03-02-028	4/15/02	IAEA Security Upgrades		\$45	7/10/02	Approved	
CP03-02-030	5/20/02	Rebaseline NMS Program		\$3,000		At RL	
FH-2002-002	5/15/02	Revise Laundry Allocation		\$243		At RL	
CP03-02-031	2/20/02	OA-50 ES&H Assessment		\$82	6/12/02	Approved	
CP03-02-032	6/30/02	Transfer FY 2003 Solutions Scope to MinSafe		- 0 -		In Development	



Plutonium Solution: Throughput during the report period more than doubled baseline expectations resulting in completely stabilizing 100 percent of the plutonium bearing solutions inventory.

Plutonium Residues: Processing of residues material has nearly tripled planned rates. In fact processing of all planned FY 2002 Sand, Slag, and Crucible material was completed on May 31, 2002. Processing of FY 2003 material is now underway and continues to exceed baseline expectations.

Plutonium Metal/Alloys/Polycubes: Preparations for startup of the polycube process are well underway and nearing completion to support an early July 2002 startup. Startup of the alloy processing campaign is currently scheduled to begin in August.